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☐ 1. Document ID: US 6673333 B1 Relevance Rank: 37

Using default format because multiple data bases are involved.

L8: Entry 3 of 3

File: USPT

Jan 6, 2004

US-PAT-NO: 6673333

DOCUMENT-IDENTIFIER: US 6673333 B1

**\*\* See image for Certificate of Correction \*\***

TITLE: Functional MRI agents for cancer imaging

DATE-ISSUED: January 6, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Meade; Thomas J.	Altadena	CA		
Fraser; Scott	La Canada	CA		
Jacobs; Russell	Arcadia	CA		

US-CL-CURRENT: 424/9.35; 424/9.363

Full	Title	Citation	Front	Review	Classification	Date	Reference				Claims	FILE	Grant De
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☐ 2. Document ID: US 20040146463 A1 Relevance Rank: 36

L8: Entry 1 of 3

File: PGPB

Jul 29, 2004

PGPUB-DOCUMENT-NUMBER: 20040146463

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20040146463 A1

TITLE: Functional MRI agents for cancer imaging

PUBLICATION-DATE: July 29, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Meade, Thomas J.	Wilmette	IL	US	
Allen, Matthew J.	Madison	WI	US	
Bakan, Douglas A.	San Diego	CA	US	

APPL-NO: 10/ 693252 [PALM]  
DATE FILED: October 24, 2003

## RELATED-US-APPL-DATA:

Application 10/693252 is a continuation-in-part-of US application 09/715859, filed November 17, 2000, US Patent No. 6673333  
Application is a non-provisional-of-provisional application 60/421470, filed October 24, 2002,  
Application is a non-provisional-of-provisional application 60/201816, filed May 4, 2000,

INT-CL: [07] A61 K 49/00, C12 N 9/64

US-CL-PUBLISHED: 424/009.323; 435/226, 530/409  
US-CL-CURRENT: 424/9.323; 435/226, 530/409

REPRESENTATIVE-FIGURES: NONE

## ABSTRACT:

The invention relates to novel magnetic resonance imaging contrast agents for imaging cancer.

[0001] This application claims the benefit of the filing date of Ser. No. 60/421,470, filed Oct. 24, 2002, under 35 U.S.C. .sctn.119(e) and is a continuation in part of Ser. No. 09/715,859, filed Nov. 17, 2000, which claims the benefit of the filing date of Ser. No. 60/201,816, filed May 4, 2000, under 35 U.S.C. .sctn.119(e).

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KWC	Draw D
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☐ 3. Document ID: US 20030021750 A1      Relevance Rank: 35

L8: Entry 2 of 3

File: PGPB

Jan 30, 2003

PGPUB-DOCUMENT-NUMBER: 20030021750  
PGPUB-FILING-TYPE: new  
DOCUMENT-IDENTIFIER: US 20030021750 A1

TITLE: Novel functional agents for magnetic resonance imaging

PUBLICATION-DATE: January 30, 2003

## INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Bakan, Douglas A.	San Diego	CA	US	
Meade, Thomas J.	Altadena	CA	US	

APPL-NO: 10/ 116706 [PALM]  
DATE FILED: April 4, 2002

## RELATED-US-APPL-DATA:

Application is a non-provisional-of-provisional application 60/282136, filed April 4, 2001,

INT-CL: [07] A61 K 49/00, A61 K 38/00, C07 K 7/00

US-CL-PUBLISHED: 424/9.36; 534/15, 534/16, 530/324

US-CL-CURRENT: 424/9.36; 530/324, 534/15, 534/16

REPRESENTATIVE-FIGURES: 1

## ABSTRACT:

The present invention is directed to non-macrocyclic functional MRI contrast agents that can be used to detect the presence of physiological target substances.

[0001] This application claims the benefit of 60/282,136, filed Apr. 4, 2001.

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KMC	Draw D
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Term	Documents
DEOXY	22783
DEOXIES	0
DEOXYS	7
(7 AND DEOXY).PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD.	3
(L7 AND DEOXY ).PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD.	3

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☐ 1. Document ID: US 20050008570 A1, WO 2003016923 A2, US 20030095922 A1, EP 1423399 A2, AU 2002323180 A1, JP 2005500387 W      Relevance Rank: 63

Using default format because multiple data bases are involved.

L9: Entry 8 of 8

File: DWPI

Jan 13, 2005

DERWENT-ACC-NO: 2003-332784

DERWENT-WEEK: 200506

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TITLE: New complex of gadolinium with oxygen donor ligand, useful as magnetic resonance imaging contrast agent, has high water exchange rate and solubility

INVENTOR: DOBLE, D M J; RAYMOND, K N ; SUNDERLAND, C J ; THOMPSON, M

PRIORITY-DATA: 2002US-0194502 (July 12, 2002), 2001US-312132P (August 13, 2001)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
<u>US 20050008570 A1</u>	January 13, 2005		000	A61K049/00
<u>WO 2003016923 A2</u>	February 27, 2003	E	145	G01R000/00
<u>US 20030095922 A1</u>	May 22, 2003		000	A61M036/14
<u>EP 1423399 A2</u>	June 2, 2004	E	000	C07F013/00
<u>AU 2002323180 A1</u>	March 3, 2003		000	G01R000/00
<u>JP 2005500387 W</u>	January 6, 2005		238	C07C235/60

INT-CL (IPC): A61 B 5/055; A61 K 49/00; A61 M 36/14; C07 C 235/60; C07 F 13/00; G01 R 0/00

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	HOME	Draw D
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☐ 2. Document ID: US 6746662 B1      Relevance Rank: 52

L9: Entry 5 of 8

File: USPT

Jun 8, 2004

US-PAT-NO: 6746662

DOCUMENT-IDENTIFIER: US 6746662 B1

TITLE: pH sensitive MRI contrast agents

DATE-ISSUED: June 8, 2004

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Sherry; A. Dean	Dallas	TX		
Zhang; Shanrong	Dallas	TX		
Wu; Kuangcong	Richardson	TX		

## ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE	CODE
Board of Regents the University of Texas System	Austin	TX				02

APPL-NO: 09/ 913092 [PALM]  
DATE FILED: January 9, 2002

## PARENT-CASE:

CROSS-REFERENCE TO PROVISIONAL APPLICATION This application claims the benefit of U.S. Provisional Application No. 60/119,348 entitled, "pH Sensitive MRI Contrast Agents," to A. Dean Sherry et al., filed on Feb. 9, 1999, which is commonly assigned with the present invention and incorporated herein by reference as if reproduced herein in its entirety.

## PCT-DATA:

APPL-NO	DATE-FILED	PUB-NO	PUB-DATE	371-DATE	102(E)-DATE
PCT/US00/03283	February 9, 2000	WO00/47111	Aug 17, 2000		

INT-CL: [07] A61 K 5/055, C07 D 255/02

US-CL-ISSUED: 424/9.393; 540/474

US-CL-CURRENT: 424/9.363; 540/474

FIELD-OF-SEARCH: 424/1.65, 424/1.77, 424/9.36, 424/9.361, 424/9.363, 424/9.365, 424/9.364, 540/465, 540/474

## PRIOR-ART-DISCLOSED:

## U.S. PATENT DOCUMENTS

PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
<u>5236695</u>	August 1993	Winchell et al.	424/9.363
<u>5573752</u>	November 1996	Ranganathan et al.	424/9.363

ART-UNIT: 1616

PRIMARY-EXAMINER: Hartley; Michael G.

## ABSTRACT:

A composition and method is disclosed for providing a magnetic resonance imaging contrast agent that is sensitive to pH, the compound and salts thereof including, a tetraaza base having a spacer at each of the amide groups, and a proton exchange attached to each of the spacer molecules, wherein the proton exchange group groups mediate proton exchange with water molecules that are trapped within the tetraaza



base molecule.

20 Claims, 12 Drawing figures

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KMC	Draw D
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☐ 3. Document ID: US 20030160610 A1      Relevance Rank: 49

L9: Entry 2 of 8

File: PGPB

Aug 28, 2003

PGPUB-DOCUMENT-NUMBER: 20030160610

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030160610 A1

TITLE: Methods for assessing amide proton content and properties in vivo via the water resonance

PUBLICATION-DATE: August 28, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Van Zijl, Peter C. M.	Ellicott City	MD	US	
Zhou, Jinyuan	Baltimore	MD	US	

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	COUNTRY	TYPE	CODE
The Johns Hopkins University School of Medicine				02	

APPL-NO: 10/ 319864    [PALM]

DATE FILED: December 13, 2002

RELATED-US-APPL-DATA:

Application is a non-provisional-of-provisional application 60/339666, filed December 13, 2001,

INT-CL: [07] G01 V 3/00, A61 K 31/165, A01 N 37/18

US-CL-PUBLISHED: 324/300; 514/622

US-CL-CURRENT: 324/300; 514/622

REPRESENTATIVE-FIGURES: 1

ABSTRACT:

Featured is an MRI/NMR methodology or process to detect amide protons of endogenous mobile proteins and peptides via the water signal. Such methods and processes can be used for the purposes of detection of pH effects and amide proton content or content changes and related mobile protein and peptide content or content changes using MR imaging. Also featured are methods whereby assessment of determined pH effects and amide proton content or content changes and related mobile protein and/or peptide content or content changes can be used in connection with diagnosis,

program and treatment of brain related disorders and diseases, cardiac disorders and diseases, and cancer and to use such methods for monitoring, detecting and assessing protein and peptide content in vivo and pathologically for any of a number of diseases or disorders of a human body, including but not limited to cancers, ischemia, Alzheimers and Parkinsons.

[0001] This application claims the benefit of U.S. Provisional Application Serial No. 60/339,666 filed Dec. 13, 2001, the teachings of which are incorporated herein by reference.

Full	Title	Citation	Font	Review	Classification	Date	Reference	Sequences	Attachments	Claims	FILE	Draw D
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☐ 4. Document ID: US 6599707 B1      Relevance Rank: 46

L9: Entry 6 of 8

File: USPT

Jul 29, 2003

US-PAT-NO: 6599707

DOCUMENT-IDENTIFIER: US 6599707 B1

TITLE: Methods for identifying hot-spot residues of binding proteins and small compounds that bind to the same

DATE-ISSUED: July 29, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Woods, Jr.; Virgil L.	San Diego	CA		

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
ExSAR Corporation	Monmouth Junction	NJ			02

APPL-NO: 09/ 393775      [PALM]

DATE FILED: September 10, 1999

PARENT-CASE:

This application claims priority to provisional patent application entitled "Methods For Identifying Hot Spot Residues of Binding Proteins And Small Compounds that Bind to Same", Ser. No. 60/099,847, filed Sep. 11, 1998.

INT-CL: [07] G01 N 33/53, G01 N 33/566, G01 N 33/563, G01 N 31/00, G01 N 33/00

US-CL-ISSUED: 435/7.1; 436/501, 436/512, 436/517, 436/2, 436/86, 436/144, 436/173

US-CL-CURRENT: 435/7.1; 436/144, 436/173, 436/2, 436/501, 436/512, 436/517, 436/86

FIELD-OF-SEARCH: 435/7.1, 436/512, 436/501, 436/317, 436/2, 436/86, 436/144, 436/173

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
<u>5101059</u>	March 1992	Carpino et al.	549/388
<u>5254730</u>	October 1993	Kilgore	562/575
<u>5273886</u>	December 1993	Aswad	435/15
<u>5470753</u>	November 1995	Sepetov et al.	436/89
<u>5658739</u>	August 1997	Woods	435/7.1
<u>5786218</u>	July 1998	Pivonka et al.	436/34
<u>6291189</u>	September 2001	Woods, Jr.	435/7.1

## FOREIGN PATENT DOCUMENTS

FOREIGN-PAT-NO	PUBN-DATE	COUNTRY	US-CL
0 529 604	March 1993	EP	
WO 99/09204	February 1999	WO	

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Hilser et al., 1996, "Structure-based Calculation Of The Equilibrium Pathway Of Proteins. Correlation With Hydrogen Exchange Protection Factors," J. Mol. Biol., vol. 262, pp 756-772.

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Englander and Englander, 1994, "Structure and energy change in hemoglobin by hydrogen exchange labeling," Methods Enzymol. 232:26-42.

Goshe and Anderson, 1999, "Hydroxyl Radical-Induced Hydrogen/Deuterium Exchange in Amino Acid Carbon-Hydrogen Bonds," Radiation Research 151:50-58.

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Mayne et al., 1992, "Effect of antibody binding on protein motions studied by hydrogen-exchange labeling and two-dimensional NMR," Biochemistry 31:10678-10685.

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Thevenon-Emeric et al., 1992 "Determination of amide hydrogen exchange rates in peptides by mass spectrometry," Anal Chem. 64(20):2456-2458.

Tsugita et al., 1992, Chemistry Letters pp. 235-238.

Wells, 1996, "Hormone mimicry," Science 273:449-450.

Statement regarding communications between Virgil L. Woods, Jr., and personnel at Case Western Reserve University in first half of 1999.

ART-UNIT: 1634

PRIMARY-EXAMINER: Zitomer; Stephanie W.

ATTY-AGENT-FIRM: Pennie & Edmonds LLP

## ABSTRACT:

The present invention provides methods of identifying hot-spot residues for one or both members of a receptor-ligand complex of interest. Further provided are methods of using receptor hot-spot residues to identify compounds that functionally bind a receptor in a manner that mimics the binding of a known ligand for the receptor.

61 Claims, 0 Drawing figures

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	None	Draw D
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☐ 5. Document ID: US 20020127182 A1      Relevance Rank: 38

L9: Entry 3 of 8

File: PGPB

Sep 12, 2002

PGPUB-DOCUMENT-NUMBER: 20020127182

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020127182 A1

TITLE: Paramagnetic metal ion-based macrocyclic magnetization transfer contrast agents and method of use

PUBLICATION-DATE: September 12, 2002

## INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Sherry, A. Dean	Dallas	TX	US	
Zhang, Shanrong	Dallas	TX	US	
Wu, Kuangcong	Plano	TX	US	

## ASSIGNEE-INFORMATION:

NAME	CITY	STATE	COUNTRY	TYPE	CODE
Board of Regents, The University of Texas System	Austin	TX			02

APPL-NO: 10/ 001858      [PALM]

DATE FILED: November 20, 2001

## RELATED-US-APPL-DATA:

Application is a non-provisional-of-provisional application 60/252269, filed November 20, 2000,

INT-CL: [07] A61 K 49/10, C07 F 5/00

US-CL-PUBLISHED: 424/9.363; 534/15, 534/16, 540/474

US-CL-CURRENT: 424/9.363; 534/15, 534/16, 540/474

REPRESENTATIVE-FIGURES: NONE

## ABSTRACT:

The present invention is directed, in general, to contrast agents (CA), and methods

and systems of using such agents for producing image contrast based on a magnetization transfer (MT) mechanism. The CA comprises a tetraazacyclododecane ligand having pendent arms R, R', R" and R''' that are amides having a general formula: --CR.sub.1H--CO--NH--CH.sub.2--R.sub.2. R.sub.1 includes organic substituents and R.sub.2 is not hydrogen. A paramagnetic metal ion (M) is coordinated to the ligand. The method, comprises subjecting a CA, in a sample, to a radio frequency pulse. The CA has pendent arms R, R', R" and R''' comprising organic substituents and the ligand further includes a M and a water molecule. A signal is obtained by applying a radio frequency pulse at a resonance frequency of the water molecule. The magnetic resonance system, comprises a magnetic resonance apparatus and the CA, the agent containing a ligand having the above described general formula.

## CROSS-REFERENCE TO PROVISIONAL APPLICATION

[0001] This application claims the benefit of U.S. Provisional Application 60/252,269 entitled, "LANTHANIDE-BASED MAGNETIZATION TRANSFER (MT) CONTRAST AGENTS FOR MAGNETIC RESONANCE IMAGING (MRI)," to A. Dean Sherry, Shanrong Zhang and Kuangcong Wu, filed on Nov. 20, 2000, which is commonly assigned with the present invention and incorporated herein by reference as if reproduced herein in its entirety.

Full	Title	Distion	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KINC	Draw. D.
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❑ 6. Document ID: US 6455525 B1      Relevance Rank: 27

L9: Entry 7 of 8

File: USPT

Sep 24, 2002

US-PAT-NO: 6455525

DOCUMENT-IDENTIFIER: US 6455525 B1

TITLE: Heterocyclic substituted pyrazolones

DATE-ISSUED: September 24, 2002

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Singh; Jasbir	Gilbertsville	PA		
Tripathy; Rabindranath	Landenberg	PA		

## ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
Cephalon, Inc.	West Chester	PA			02

APPL-NO: 09/ 702191    [PALM]

DATE FILED: October 31, 2000

## PARENT-CASE:

This Application claims benefit of U.S. provisional Application Serial No. 60/163,377 filed Nov. 4, 1999.

INT-CL: [07] A61 K 31/53, A61 K 31/415, C07 D 251/00, C07 D 213/00, C07 D 231/06

US-CL-ISSUED: 514/241; 514/242, 514/247, 514/252.1, 514/255.05, 514/256, 514/277, 514/403, 514/406, 514/407, 544/180, 544/182, 544/224, 544/238, 544/242, 544/336, 546/1, 548/356.1, 548/366.1, 548/364.1, 548/364.7, 548/367.1, 548/379.1, 549/49, 549/74, 549/200, 549/229

US-CL-CURRENT: 514/241; 514/242, 514/247, 514/252.1, 514/255.05, 514/256, 514/277, 514/403, 514/406, 514/407, 544/180, 544/182, 544/224, 544/238, 544/242, 544/336, 546/1, 548/356.1, 548/364.1, 548/364.7, 548/366.1, 548/367.1, 548/379.1, 549/200, 549/229, 549/49, 549/74

FIELD-OF-SEARCH: 544/224, 544/238, 544/180, 544/182, 544/242, 544/336, 544/405, 548/356.1, 548/366.1, 548/364.1, 548/364.7, 548/367.1, 548/370.4, 548/379.1, 514/241, 514/242, 514/247, 514/252.1, 514/255.05, 514/256, 514/403, 514/406, 514/277, 514/407, 514/404, 546/1, 549/49, 549/74, 549/200, 549/229

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
<u>3717629</u>	February 1973	Maier et al.	260/244
<u>4035190</u>	July 1977	Beretta et al.	96/127
<u>4909827</u>	March 1990	Gehring et al.	71/92
<u>5174808</u>	December 1992	Wroblowsky et al.	71/92
<u>5780437</u>	July 1998	Goulet et al.	544/405
<u>6034099</u>	March 2000	Pamukcu et al.	514/310

FOREIGN PATENT DOCUMENTS

FOREIGN-PAT-NO	PUBN-DATE	COUNTRY	US-CL
2081595	December 1971	FR	
2224141	October 1974	FR	
10-151868	June 1998	JP	
9413643	June 1994	WO	
WO 00/51989	September 2000	WO	
WO 01/09121	February 2001	WO	

ART-UNIT: 1624

PRIMARY-EXAMINER: Shah; Mukund J.

ASSISTANT-EXAMINER: Patel; Sudhaker R.

ATTY-AGENT-FIRM: Hrubiec; Robert T. Voelk; Eric K.

ABSTRACT:

The present invention is directed to novel heterocyclic substituted pyrazolones, including pharmaceutical compositions, diagnostic kits, assay standards or reagents containing the same, and methods of using the same as therapeutics. The invention is also directed to intermediates and processes for making these novel compounds.

20 Claims, 0 Drawing figures

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KLOC	Draw. D.
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☐ 7. Document ID: US 20030162775 A1      Relevance Rank: 27

L9: Entry 1 of 8

File: PGPB

Aug 28, 2003

PGPUB-DOCUMENT-NUMBER: 20030162775

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030162775 A1

TITLE: Heterocyclic substituted pyrazolones

PUBLICATION-DATE: August 28, 2003

## INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Singh, Jasbir	Gilbertsville	PA	US	
Tripathy, Rabindranath	Landenberg	PA	US	

## ASSIGNEE-INFORMATION:

NAME	CITY	STATE	COUNTRY	TYPE CODE
Cephalon, Inc.				02

APPL-NO: 10/ 225670    [PALM]

DATE FILED: August 22, 2002

## RELATED-US-APPL-DATA:

Application 10/225670 is a continuation-of US application 09/702191, filed October 31, 2000, US Patent No. 6455525

Application is a non-provisional-of-provisional application 60/163377, filed November 4, 1999,

INT-CL: [07] C07 D 417/02, C07 D 413/02, C07 D 43/02, A61 K 31/541, A61 K 31/5377,  
A61 K 31/496, A61 K 31/454, A61 K 31/415

US-CL-PUBLISHED: 514/227.8; 514/235.8, 514/254.05, 514/326, 514/365, 514/374,  
514/397, 514/404, 544/60, 544/140, 544/371, 546/211, 548/203, 548/215, 548/312.4,  
548/364.1

US-CL-CURRENT: 514/227.8; 514/235.8, 514/254.05, 514/326, 514/365, 514/374,  
514/397, 514/404, 544/140, 544/371, 544/60, 546/211, 548/203, 548/215, 548/312.4,  
548/364.1

## ABSTRACT:

The present invention is directed to novel heterocyclic substituted pyrazolones, including pharmaceutical compositions, diagnostic kits, assay standards or reagents containing the same, and methods of using the same as therapeutics. The invention is also directed to intermediates and processes for making these novel compounds.



Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KMC	Draw. D.
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☐ 8. Document ID: US 6831075 B2      Relevance Rank: 26

L9: Entry 4 of 8

File: USPT

Dec 14, 2004

US-PAT-NO: 6831075

DOCUMENT-IDENTIFIER: US 6831075 B2

TITLE: Heterocyclic substituted pyrazolones

DATE-ISSUED: December 14, 2004

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Singh; Jasbir	Gilbertsville	PA		
Tripathy; Rabindranath	Landenberg	PA		

## ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
Cephalon, Inc.	West Chester	PA			02

APPL-NO: 10/ 225670    [PALM]

DATE FILED: August 22, 2002

## PARENT-CASE:

This application is a continuation of Ser. No. 09/702,191 filed Oct. 31, 2000 now U.S. Pat. No. 6,455,525 which claims benefit of 60/163,377 filed Nov. 4, 1999.

INT-CL: [07] A61 K 31/33, A61 K 31/433, C07 D 239/00, C07 D 241/00, C07 D 231/00

US-CL-ISSUED: 514/183; 514/241, 514/242, 514/247, 514/252.1, 514/255.05, 514/256, 514/277, 514/403, 514/406, 514/407, 544/180, 544/182, 544/224, 544/238, 544/242, 544/336, 546/1, 548/356.1, 548/365.1, 548/364.1, 548/364.7, 548/367.1, 548/379.1, 549/49, 549/74, 549/200, 549/229

US-CL-CURRENT: 514/183; 514/241, 514/242, 514/247, 514/252.1, 514/255.05, 514/256, 514/277, 514/403, 514/406, 514/407, 544/180, 544/182, 544/224, 544/238, 544/242, 544/336, 546/1, 548/356.1, 548/364.1, 548/364.7, 548/365.1, 548/367.1, 548/379.1, 549/200, 549/229, 549/49, 549/74

FIELD-OF-SEARCH: 514/183, 514/241, 514/242, 514/247, 514/252.1, 514/256, 514/255.05, 514/277, 514/403, 514/406, 514/407, 546/1, 544/180, 544/182, 544/224, 544/238, 544/242, 544/336, 548/356.1, 548/364, 548/364.7, 548/379.1, 548/386.1, 548/388.1, 548/364.1, 548/367.1, 549/49, 549/229, 549/74, 549/200

## PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
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<u>3717629</u>	February 1973	Maier et al.	260/244
<u>4035190</u>	July 1977	Beretta et al.	96/127
<u>4909827</u>	March 1990	Gehring et al.	71/92
<u>5174808</u>	December 1992	Wroblowsky et al.	71/92
<u>6034099</u>	March 2000	Pamukcu et al.	514/310
<u>6455525</u>	September 2002	Singh et al.	514/241

## FOREIGN PATENT DOCUMENTS

FOREIGN-PAT-NO	PUBN-DATE	COUNTRY	US-CL
2045049	March 1972	DE	
2081595	December 1971	FR	
2224141	October 1974	FR	
10-151868	June 1998	JP	
WO 00/51989	September 2000	WO	
WO 01/09121	February 2001	WO	

## OTHER PUBLICATIONS

Coyle et al, Science, vol. 219, 1184-90(1983).\*

Cecil Textbook of Medicine, 20th Edn., vol. 1, pp. 100401010(1996).\*

Ucken et al, Current Cancer Drug Targets, 1,59-71(2001).\*

Chemical Abstract DN 114:6530, also cited as JP02193994.\*

Kharchenko et al, Chemica Abstract DN 93:8079, also cited as Vses, Nauchn. Konf. Khim. Tekhnol. Furanovyykh Soedin., (Tezisy Dok., 3.sup.rd, 112, (1978).\*

Kubota et al, Chemical Abstract DN 63:80597, also cited as Bull. of the Chem. Soc. of Japan, 38/7,1191-4(1965).

ART-UNIT: 1624

PRIMARY-EXAMINER: Raymond; Richard L.

ASSISTANT-EXAMINER: Patel; Sudhaker B.

ATTY-AGENT-FIRM: Hrubiec; Robert T. Larsen; Scott K.

## ABSTRACT:

The present invention is directed to novel heterocyclic substituted pyrazolones, including pharmaceutical compositions, diagnostic kits, assay standards or reagents containing the same, and methods of using the same as therapeutics. The invention is also directed to intermediates and processes for making these novel compounds.

29 Claims, 0 Drawing figures

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KWC	Draw D
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Term	Documents
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PROTON	66779
PROTONS	30814
EXCHANGES\$4	0
EXCHANGE	778317
EXCHANGEA	122
EXCHANGEAB	12
EXCHANGEABE	7
EXCHANGEABEL	2
EXCHANGEABFE	1
EXCHANGEABI	5
(L7 AND ((PROTON ADJ EXCHANGES\$4) OR (EXCHANGES\$4 ADJ PROTON)) ).PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD.	8

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☐ 1. Document ID: US 20050008570 A1, WO 2003016923 A2, US 20030095922 A1, EP 1423399 A2, AU 2002323180 A1, JP 2005500387 W      Relevance Rank: 63

Using default format because multiple data bases are involved.

L9: Entry 8 of 8

File: DWPI

Jan 13, 2005

DERWENT-ACC-NO: 2003-332784

DERWENT-WEEK: 200506

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TITLE: New complex of gadolinium with oxygen donor ligand, useful as magnetic resonance imaging contrast agent, has high water exchange rate and solubility

INVENTOR: DOBLE, D M J; RAYMOND, K N ; SUNDERLAND, C J ; THOMPSON, M

PRIORITY-DATA: 2002US-0194502 (July 12, 2002), 2001US-312132P (August 13, 2001)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
<u>US 20050008570 A1</u>	January 13, 2005		000	A61K049/00
<u>WO 2003016923 A2</u>	February 27, 2003	E	145	G01R000/00
<u>US 20030095922 A1</u>	May 22, 2003		000	A61M036/14
<u>EP 1423399 A2</u>	June 2, 2004	E	000	C07F013/00
<u>AU 2002323180 A1</u>	March 3, 2003		000	G01R000/00
<u>JP 2005500387 W</u>	January 6, 2005		238	C07C235/60

INT-CL (IPC): A61 B 5/055; A61 K 49/00; A61 M 36/14; C07 C 235/60; C07 F 13/00; G01 R 0/00

Full	Title	Citation	Font	Review	Classification	Date	Reference			Claims	Full	Grant
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☐ 2. Document ID: US 6746662 B1      Relevance Rank: 52

L9: Entry 5 of 8

File: USPT

Jun 8, 2004

US-PAT-NO: 6746662

DOCUMENT-IDENTIFIER: US 6746662 B1

TITLE: pH sensitive MRI contrast agents

DATE-ISSUED: June 8, 2004

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Sherry; A. Dean	Dallas	TX		
Zhang; Shanrong	Dallas	TX		
Wu; Kuangcong	Richardson	TX		

## ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE	CODE
Board of Regents the University of Texas System	Austin	TX				02

APPL-NO: 09/ 913092 [PALM]

DATE FILED: January 9, 2002

## PARENT-CASE:

CROSS-REFERENCE TO PROVISIONAL APPLICATION This application claims the benefit of U.S. Provisional Application No. 60/119,348 entitled, "pH Sensitive MRI Contrast Agents," to A. Dean Sherry et al., filed on Feb. 9, 1999, which is commonly assigned with the present invention and incorporated herein by reference as if reproduced herein in its entirety.

## PCT-DATA:

APPL-NO	DATE-FILED	PUB-NO	PUB-DATE	371-DATE	102(E)-DATE
PCT/US00/03283	February 9, 2000	W000/47111	Aug 17, 2000		

INT-CL: [07] A61 K 5/055, C07 D 255/02

US-CL-ISSUED: 424/9.393; 540/474

US-CL-CURRENT: 424/9.363; 540/474

FIELD-OF-SEARCH: 424/1.65, 424/1.77, 424/9.36, 424/9.361, 424/9.363, 424/9.365, 424/9.364, 540/465, 540/474

## PRIOR-ART-DISCLOSED:

## U.S. PATENT DOCUMENTS

PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
<u>5236695</u>	August 1993	Winchell et al.	424/9.363
<u>5573752</u>	November 1996	Ranganathan et al.	424/9.363

ART-UNIT: 1616

PRIMARY-EXAMINER: Hartley; Michael G.

## ABSTRACT:

A composition and method is disclosed for providing a magnetic resonance imaging contrast agent that is sensitive to pH, the compound and salts thereof including, a tetraaza base having a spacer at each of the amide groups, and a proton exchange attached to each of the spacer molecules, wherein the proton exchange group groups mediate proton exchange with water molecules that are trapped within the tetraaza



base molecule.

20 Claims, 12 Drawing figures

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	RMC	Draw D
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☐ 3. Document ID: US 20030160610 A1      Relevance Rank: 49

L9: Entry 2 of 8

File: PGPB

Aug 28, 2003

PGPUB-DOCUMENT-NUMBER: 20030160610

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030160610 A1

TITLE: Methods for assessing amide proton content and properties in vivo via the water resonance

PUBLICATION-DATE: August 28, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Van Zijl, Peter C. M.	Ellicott City	MD	US	
Zhou, Jinyuan	Baltimore	MD	US	

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	COUNTRY	TYPE	CODE
The Johns Hopkins University School of Medicine					02

APPL-NO: 10/ 319864      [PALM]

DATE FILED: December 13, 2002

RELATED-US-APPL-DATA:

Application is a non-provisional-of-provisional application 60/339666, filed December 13, 2001,

INT-CL: [07] G01 V 3/00, A61 K 31/165, A01 N 37/18

US-CL-PUBLISHED: 324/300; 514/622

US-CL-CURRENT: 324/300; 514/622

REPRESENTATIVE-FIGURES: 1

ABSTRACT:

Featured is an MRI/NMR methodology or process to detect amide protons of endogenous mobile proteins and peptides via the water signal. Such methods and processes can be used for the purposes of detection of pH effects and amide proton content or content changes and related mobile protein and peptide content or content changes using MR imaging. Also featured are methods whereby assessment of determined pH effects and amide proton content or content changes and related mobile protein and/or peptide content or content changes can be used in connection with diagnosis,

program and treatment of brain related disorders and diseases, cardiac disorders and diseases, and cancer and to use such methods for monitoring, detecting and assessing protein and peptide content in vivo and pathologically for any of a number of diseases or disorders of a human body, including but not limited to cancers, ischemia, Alzheimers and Parkinsons.

[0001] This application claims the benefit of U.S. Provisional Application Serial No. 60/339,666 filed Dec. 13, 2001, the teachings of which are incorporated herein by reference.

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	HTML	Drawings
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☐ 4. Document ID: US 6599707 B1      Relevance Rank: 46

L9: Entry 6 of 8

File: USPT

Jul 29, 2003

US-PAT-NO: 6599707

DOCUMENT-IDENTIFIER: US 6599707 B1

TITLE: Methods for identifying hot-spot residues of binding proteins and small compounds that bind to the same

DATE-ISSUED: July 29, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Woods, Jr.; Virgil L.	San Diego	CA		

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
ExSAR Corporation	Monmouth Junction	NJ			02

APPL-NO: 09/ 393775      [PALM]

DATE FILED: September 10, 1999

PARENT-CASE:

This application claims priority to provisional patent application entitled "Methods For Identifying Hot Spot Residues of Binding Proteins And Small Compounds that Bind to Same", Ser. No. 60/099,847, filed Sep. 11, 1998.

INT-CL: [07] G01 N 33/53, G01 N 33/566, G01 N 33/563, G01 N 31/00, G01 N 33/00

US-CL-ISSUED: 435/7.1; 436/501, 436/512, 436/517, 436/2, 436/86, 436/144, 436/173

US-CL-CURRENT: 435/7.1; 436/144, 436/173, 436/2, 436/501, 436/512, 436/517, 436/86

FIELD-OF-SEARCH: 435/7.1, 436/512, 436/501, 436/317, 436/2, 436/86, 436/144, 436/173

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
<u>5101059</u>	March 1992	Carpino et al.	549/388
<u>5254730</u>	October 1993	Kilgore	562/575
<u>5273886</u>	December 1993	Aswad	435/15
<u>5470753</u>	November 1995	Sepetov et al.	436/89
<u>5658739</u>	August 1997	Woods	435/7.1
<u>5786218</u>	July 1998	Pivonka et al.	436/34
<u>6291189</u>	September 2001	Woods, Jr.	435/7.1

## FOREIGN PATENT DOCUMENTS

FOREIGN-PAT-NO	PUBN-DATE	COUNTRY	US-CL
0 529 604	March 1993	EP	
WO 99/09204	February 1999	WO	

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Statement regarding communications between Virgil L. Woods, Jr., and personnel at Case Western Reserve University in first half of 1999.

ART-UNIT: 1634

PRIMARY-EXAMINER: Zitomer; Stephanie W.

ATTY-AGENT-FIRM: Pennie & Edmonds LLP

## ABSTRACT:

The present invention provides methods of identifying hot-spot residues for one or both members of a receptor-ligand complex of interest. Further provided are methods of using receptor hot-spot residues to identify compounds that functionally bind a receptor in a manner that mimics the binding of a known ligand for the receptor.

61 Claims, 0 Drawing figures

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	NOTE	Drawings
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☐ 5. Document ID: US 20020127182 A1      Relevance Rank: 38

L9: Entry 3 of 8

File: PGPB

Sep 12, 2002

PGPUB-DOCUMENT-NUMBER: 20020127182

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020127182 A1

TITLE: Paramagnetic metal ion-based macrocyclic magnetization transfer contrast agents and method of use

PUBLICATION-DATE: September 12, 2002

## INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Sherry, A. Dean	Dallas	TX	US	
Zhang, Shanrong	Dallas	TX	US	
Wu, Kuangcong	Plano	TX	US	

## ASSIGNEE-INFORMATION:

NAME	CITY	STATE	COUNTRY	TYPE	CODE
Board of Regents, The University of Texas System	Austin	TX			02

APPL-NO: 10/ 001858      [PALM]

DATE FILED: November 20, 2001

## RELATED-US-APPL-DATA:

Application is a non-provisional-of-provisional application 60/252269, filed November 20, 2000,

INT-CL: [07] A61 K 49/10, C07 F 5/00

US-CL-PUBLISHED: 424/9.363; 534/15, 534/16, 540/474

US-CL-CURRENT: 424/9.363; 534/15, 534/16, 540/474

REPRESENTATIVE-FIGURES: NONE

## ABSTRACT:

The present invention is directed, in general, to contrast agents (CA), and methods



and systems of using such agents for producing image contrast based on a magnetization transfer (MT) mechanism. The CA comprises a tetraazacyclododecane ligand having pendent arms R, R', R" and R''' that are amides having a general formula: --CR.sub.1H--CO--NH--CH.sub.2--R.sub.2. R.sub.1 includes organic substituents and R.sub.2 is not hydrogen. A paramagnetic metal ion (M) is coordinated to the ligand. The method, comprises subjecting a CA, in a sample, to a radio frequency pulse. The CA has pendent arms R, R', R" and R''' comprising organic substituents and the ligand further includes a M and a water molecule. A signal is obtained by applying a radio frequency pulse at a resonance frequency of the water molecule. The magnetic resonance system, comprises a magnetic resonance apparatus and the CA, the agent containing a ligand having the above described general formula.

## CROSS-REFERENCE TO PROVISIONAL APPLICATION

[0001] This application claims the benefit of U.S. Provisional Application 60/252,269 entitled, "LANTHANIDE-BASED MAGNETIZATION TRANSFER (MT) CONTRAST AGENTS FOR MAGNETIC RESONANCE IMAGING (MRI)," to A. Dean Sherry, Shanrong Zhang and Kuangcong Wu, filed on Nov. 20, 2000, which is commonly assigned with the present invention and incorporated herein by reference as if reproduced herein in its entirety.

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KLOC	Draw. Des
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☐ 6. Document ID: US 6455525 B1      Relevance Rank: 27

L9: Entry 7 of 8

File: USPT

Sep 24, 2002

US-PAT-NO: 6455525

DOCUMENT-IDENTIFIER: US 6455525 B1

TITLE: Heterocyclic substituted pyrazolones

DATE-ISSUED: September 24, 2002

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Singh; Jasbir	Gilbertsville	PA		
Tripathy; Rabindranath	Landenberg	PA		

## ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
Cephalon, Inc.	West Chester	PA			02

APPL-NO: 09/ 702191    [PALM]

DATE FILED: October 31, 2000

## PARENT-CASE:

This Application claims benefit of U.S. provisional Application Serial No. 60/163,377 filed Nov. 4, 1999.

INT-CL: [07] A61 K 31/53, A61 K 31/415, C07 D 251/00, C07 D 213/00, C07 D 231/06

US-CL-ISSUED: 514/241; 514/242, 514/247, 514/252.1, 514/255.05, 514/256, 514/277, 514/403, 514/406, 514/407, 544/180, 544/182, 544/224, 544/238, 544/242, 544/336, 546/1, 548/356.1, 548/366.1, 548/364.1, 548/364.7, 548/367.1, 548/379.1, 549/49, 549/74, 549/200, 549/229

US-CL-CURRENT: 514/241; 514/242, 514/247, 514/252.1, 514/255.05, 514/256, 514/277, 514/403, 514/406, 514/407, 544/180, 544/182, 544/224, 544/238, 544/242, 544/336, 546/1, 548/356.1, 548/364.1, 548/364.7, 548/366.1, 548/367.1, 548/379.1, 549/200, 549/229, 549/49, 549/74

FIELD-OF-SEARCH: 544/224, 544/238, 544/180, 544/182, 544/242, 544/336, 544/405, 548/356.1, 548/366.1, 548/364.1, 548/364.7, 548/367.1, 548/370.4, 548/379.1, 514/241, 514/242, 514/247, 514/252.1, 514/255.05, 514/256, 514/403, 514/406, 514/277, 514/407, 514/404, 546/1, 549/49, 549/74, 549/200, 549/229

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
<u>3717629</u>	February 1973	Maier et al.	260/244
<u>4035190</u>	July 1977	Beretta et al.	96/127
<u>4909827</u>	March 1990	Gehring et al.	71/92
<u>5174808</u>	December 1992	Wroblowsky et al.	71/92
<u>5780437</u>	July 1998	Goulet et al.	544/405
<u>6034099</u>	March 2000	Pamukcu et al.	514/310

FOREIGN PATENT DOCUMENTS

FOREIGN-PAT-NO	PUBN-DATE	COUNTRY	US-CL
2081595	December 1971	FR	
2224141	October 1974	FR	
10-151868	June 1998	JP	
9413643	June 1994	WO	
WO 00/51989	September 2000	WO	
WO 01/09121	February 2001	WO	

ART-UNIT: 1624

PRIMARY-EXAMINER: Shah; Mukund J.

ASSISTANT-EXAMINER: Patel; Sudhaker R.

ATTY-AGENT-FIRM: Hrubiec; Robert T. Voelk; Eric K.

ABSTRACT:

The present invention is directed to novel heterocyclic substituted pyrazolones, including pharmaceutical compositions, diagnostic kits, assay standards or reagents containing the same, and methods of using the same as therapeutics. The invention is also directed to intermediates and processes for making these novel compounds.

20 Claims, 0 Drawing figures

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KWC	Draw D
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7. Document ID: US 20030162775 A1      Relevance Rank: 27

L9: Entry 1 of 8

File: PGPB

Aug 28, 2003

PGPUB-DOCUMENT-NUMBER: 20030162775

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20030162775 A1

TITLE: Heterocyclic substituted pyrazolones

PUBLICATION-DATE: August 28, 2003

## INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Singh, Jasbir	Gilbertsville	PA	US	
Tripathy, Rabindranath	Landenberg	PA	US	

## ASSIGNEE-INFORMATION:

NAME	CITY	STATE	COUNTRY	TYPE CODE
Cephalon, Inc.				02

APPL-NO: 10/ 225670    [PALM]

DATE FILED: August 22, 2002

## RELATED-US-APPL-DATA:

Application 10/225670 is a continuation-of US application 09/702191, filed October 31, 2000, US Patent No. 6455525

Application is a non-provisional-of-provisional application 60/163377, filed November 4, 1999,

INT-CL: [07] C07 D 417/02, C07 D 413/02, C07 D 43/02, A61 K 31/541, A61 K 31/5377,  
A61 K 31/496, A61 K 31/454, A61 K 31/415

US-CL-PUBLISHED: 514/227.8; 514/235.8, 514/254.05, 514/326, 514/365, 514/374,  
514/397, 514/404, 544/60, 544/140, 544/371, 546/211, 548/203, 548/215, 548/312.4,  
548/364.1

US-CL-CURRENT: 514/227.8; 514/235.8, 514/254.05, 514/326, 514/365, 514/374,  
514/397, 514/404, 544/140, 544/371, 544/60, 546/211, 548/203, 548/215, 548/312.4,  
548/364.1

## ABSTRACT:

The present invention is directed to novel heterocyclic substituted pyrazolones, including pharmaceutical compositions, diagnostic kits, assay standards or reagents containing the same, and methods of using the same as therapeutics. The invention is also directed to intermediates and processes for making these novel compounds.

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KMC	Draw D
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☐ 8. Document ID: US 6831075 B2      Relevance Rank: 26

L9: Entry 4 of 8

File: USPT

Dec 14, 2004

US-PAT-NO: 6831075

DOCUMENT-IDENTIFIER: US 6831075 B2

TITLE: Heterocyclic substituted pyrazolones

DATE-ISSUED: December 14, 2004

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Singh; Jasbir	Gilbertsville	PA		
Tripathy; Rabindranath	Landenberg	PA		

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
Cephalon, Inc.	West Chester	PA			02

APPL-NO: 10/ 225670    [PALM]

DATE FILED: August 22, 2002

PARENT-CASE:

This application is a continuation of Ser. No. 09/702,191 filed Oct. 31, 2000 now U.S. Pat. No. 6,455,525 which claims benefit of 60/163,377 filed Nov. 4, 1999.

INT-CL: [07] A61 K 31/33, A61 K 31/433, C07 D 239/00, C07 D 241/00, C07 D 231/00

US-CL-ISSUED: 514/183; 514/241, 514/242, 514/247, 514/252.1, 514/255.05, 514/256, 514/277, 514/403, 514/406, 514/407, 544/180, 544/182, 544/224, 544/238, 544/242, 544/336, 546/1, 548/356.1, 548/365.1, 548/364.1, 548/364.7, 548/367.1, 548/379.1, 549/49, 549/74, 549/200, 549/229

US-CL-CURRENT: 514/183; 514/241, 514/242, 514/247, 514/252.1, 514/255.05, 514/256, 514/277, 514/403, 514/406, 514/407, 544/180, 544/182, 544/224, 544/238, 544/242, 544/336, 546/1, 548/356.1, 548/364.1, 548/364.7, 548/365.1, 548/367.1, 548/379.1, 549/200, 549/229, 549/49, 549/74

FIELD-OF-SEARCH: 514/183, 514/241, 514/242, 514/247, 514/252.1, 514/256, 514/255.05, 514/277, 514/403, 514/406, 514/407, 546/1, 544/180, 544/182, 544/224, 544/238, 544/242, 544/336, 548/356.1, 548/364, 548/364.7, 548/379.1, 548/386.1, 548/388.1, 548/364.1, 548/367.1, 549/49, 549/229, 549/74, 549/200

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
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<u>5174808</u>	December 1992	Wroblowsky et al.	71/92
<u>6034099</u>	March 2000	Pamukcu et al.	514/310
<u>6455525</u>	September 2002	Singh et al.	514/241

## FOREIGN PATENT DOCUMENTS

FOREIGN-PAT-NO	PUBN-DATE	COUNTRY	US-CL
2045049	March 1972	DE	
2081595	December 1971	FR	
2224141	October 1974	FR	
10-151868	June 1998	JP	
WO 00/51989	September 2000	WO	
WO 01/09121	February 2001	WO	

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Coyle et al, Science, vol. 219, 1184-90(1983).\*

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Ucken et al, Current Cancer Drug Targets, 1,59-71(2001).\*

Chemical Abstract DN 114:6530, also cited as JP02193994.\*

Kharchenko et al, Chemica Abstract DN 93:8079, also cited as Vses, Nauchn. Konf. Khim. Tekhnol. Furanovyykh Soedin., (Tezisy Dok., 3.sup.rd, 112, (1978).\*

Kubota et al, Chemical Abstract DN 63:80597, also cited as Bull. of the Chem. Soc. of Japan, 38/7, 1191-4(1965).

ART-UNIT: 1624

PRIMARY-EXAMINER: Raymond; Richard L.

ASSISTANT-EXAMINER: Patel; Sudhaker B.

ATTY-AGENT-FIRM: Hrubiec; Robert T. Larsen; Scott K.

## ABSTRACT:

The present invention is directed to novel heterocyclic substituted pyrazolones, including pharmaceutical compositions, diagnostic kits, assay standards or reagents containing the same, and methods of using the same as therapeutics. The invention is also directed to intermediates and processes for making these novel compounds.

29 Claims, 0 Drawing figures

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KMC	Draw. O
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Term

Documents



PROTON	66779
PROTONS	30814
EXCHANGES\$4	0
EXCHANGE	778317
EXCHANGEA	122
EXCHANGEAB	12
EXCHANGEABE	7
EXCHANGEABEL	2
EXCHANGEABFE	1
EXCHANGEABI	5
(L7 AND ((PROTON ADJ EXCHANGES\$4) OR (EXCHANGES\$4 ADJ PROTON)) ).PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD.	8

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<u>L9</u>	L7 and ((proton adj exchange\$4) or (exchange\$4 adj proton))	8	<u>L9</u>
<u>L8</u>	L7 and deoxy	3	<u>L8</u>
<u>L7</u>	L6 and (water adj exchange\$4)	71	<u>L7</u>
<u>L6</u>	(magnetic adj resonance) and (oxygen\$6)	22947	<u>L6</u>
<u>L5</u>	L4 and (magnetic adj resonance)	11	<u>L5</u>
<u>L4</u>	Van adj Zijl adj (et adj al)	61	<u>L4</u>
<u>L3</u>	Van adj Zijl	133	<u>L3</u>
<u>L2</u>	US2003016061	0	<u>L2</u>
<u>L1</u>	2003016061	4	<u>L1</u>

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Term	Documents
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EXCHANGEABIC	2
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DB=PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD; PLUR=YES; OP=ADJ

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<u>L3</u>	Van adj Zijl	133	<u>L3</u>
<u>L2</u>	US2003016061	0	<u>L2</u>
<u>L1</u>	2003016061	4	<u>L1</u>

END OF SEARCH HISTORY